

**Amendments to the Claims**

Please cancel claim 1 without prejudice.

The following listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

Claim 1 (cancelled)

2. (currently amended) A method for detecting a tracking short in an electric circuit comprising:

measuring an absolute value of ~~the~~ a current value at each unit time to obtain a current waveform, wherein said absolute value is used for a judgment, and the unit time ~~which is used for judgment wherein the unit time is what~~ is obtained by dividing a predetermined period into several divided time units;

calculating a variation of the current value at each unit time comprising getting the difference between an absolute value at each unit time and an absolute value at an adjacent unit time, and judging tracking short to have occurred when a frequency of the variation in a predetermined range for the predetermined period satisfies a pre-set reference.

3. (currently amended) A method for detecting a tracking short according to claim 2, wherein there exist a plurality of said ranges of the variation ~~ranges of the current value~~, and said reference of frequency is set respectively for each of said plurality of ranges, and wherein the said ~~step of judging~~ judgment is judging the tracking short to have occurred when each frequency in all the ranges satisfies the corresponding reference.

4. (previously presented) A method for detecting tracking short according to claim 2, wherein the judgment is performed at every unit time for the predetermined period.

5. (currently amended) A method for detecting tracking short according to claim 2,  
further comprising dividing the unit time into several divided time units, obtaining an absolute value of a peak value of current in each said divided time unit, calculating a difference between said value and the previous or next value of it, and initializing and restarting the said judgment when the absolute value of said difference is below ~~the~~a predetermined reference value.
6. (currently amended) A method for detecting tracking short according to claim 3, wherein the judgment is performed at every unit time for ~~the~~a predetermined period.
7. (currently amended) A method for detecting tracking short according to claim 3,  
further comprising dividing the unit time into several divided time units, obtaining an absolute value of a peak value of current in each said divided time unit, calculating a difference between said value and the previous or next value of it, and initializing and restarting the said judgment when the absolute value of said difference is below ~~the~~a predetermined reference value.
8. (currently amended) A method for detecting tracking short according to claim 4,  
further comprising dividing the unit time into several ~~divide~~divided time units, obtaining an absolute value of a peak value of current in each said divided time unit, calculating a difference between said value and the previous or next value of it, and initializing and restarting the said judgment when the absolute value of said difference is below ~~the~~a predetermined reference value.
9. (currently amended) A method for detecting tracking short according to claim 6,  
further comprising dividing the unit time into several divided time units, obtaining an absolute value of a peak value of current in each said divided time unit, calculating a difference between said value and the previous or next value of it, and initializing and restarting the said

judgment when the absolute value of said difference is below ~~the~~ a predetermined reference value.

10. (currently amended) A method for detecting a tracking short in an electric circuit comprising:

measuring an absolute value of ~~the~~ a current value at each unit time to obtain a current waveform, wherein said absolute value is used for a judgment, and the unit time which is used for judgment wherein the unit time is what is obtained by dividing a predetermined period into several divided unit times;

calculating a variation of the current value at each unit time;

and judging tracking short to have occurred when a frequency of the variation in a predetermined range for the predetermined period satisfies a pre-set reference;  
wherein the judgment is performed at every unit time for the predetermined period.

11. (previously presented) A method for detecting tracking short according to claim 10, wherein calculating a variation of the current value at each unit time comprises getting the difference between an absolute value at each unit time and an absolute value at an adjacent unit time;

12. (currently amended) A method for detecting a tracking short according to claim 10, wherein there exist a plurality of ~~said~~ ranges of the variation of the current value, ranges, and said reference of frequency is set repectively for each of said plurality of ranges;

and wherein ~~the said step of judging judgment~~ is judging the tracking short to have occurred when each frequency in all the ranges satisfies the corresponding reference

13. (currently amended) A method for detecting tracking short according to claim 10, further comprising dividing the unit time into several divided time units, obtaining an absolute value of a peak value of current in each said divided time unit, calculating a difference between said value and the previous or next value of it, and initializing and restarting the said

judgment when the absolute value of said difference is below ~~the~~a predetermined reference value.

14. (currently amended) A method for detecting a tracking short according to claim 11, wherein there exist a plurality of ~~said~~ranges of the variation-ranges of the current value, and said reference of frequency is set repectively for each of said plurality of ranges; and wherein the said ~~step of judging judgment~~ is judging the tracking short to have occurred when each frequency in all the ranges satisfies the corresponding reference

15. (currently amended) A method for detecting tracking short according to claim 11, further comprising dividing the unit time into several divided time units, obtaining an absolute value of a peak value of current in each said divided time unit, calculating a difference between said value and the previous or next value of it, and initializing and restarting the said judgment when the absolute value of said difference is below ~~the~~a predetermined reference value.